

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

- 1 1. (Currently amended) A delivery system, comprising:
2 a frame;
3 a plurality of hoppers attachable to the frame in a vertically spaced apart
4 arrangement, wherein the hoppers are each configured to hold a plurality of sheet-like materials
5 in a generally vertical orientation;
6 at least one upper belt movably coupled to the frame, wherein the belt is
7 configured to move the sheet-like materials downward from the hoppers;
8 at least one suction apparatus that is associated with each hopper; and
9 a moving system that is configured to move the suction apparatus to grasp and
10 remove one of the sheet-like materials from the hopper and into contact ~~contact~~ with the upper
11 belt, wherein the suction apparatus is configured to grasp and remove the sheet-like material
12 from the hopper while maintaining the sheet-like material generally vertically oriented until the
13 sheet-like material comes into contact with the upper belt.
- 1 2. (Original) A system as in claim 1, wherein the moving system comprises
2 a cylinder to move the suction apparatus toward and away from the hopper, and a linkage
3 arrangement that is pivotally coupled to the frame member to move the suction apparatus in an
4 up and down motion.
- 1 3. (Original) A system as in claim 1, further comprising at least one contact
2 roller disposed below each hopper and a biasing roller that is spring biased against the contact
3 roller.
- 1 4. (Original) A system as in claim 1, wherein the suction apparatus
2 comprises a length of tubing and a suction cup coupled to the tubing.
- 1 5. (Original) A system as in claim 1, wherein upper belt is spaced apart from
2 another upper belt, wherein the suction apparatus is movable beyond the two upper belts, and

3 further comprising two additional suction apparatus that located on opposite sides of the two
4 upper belts.

1 6. (Original) system as in claim 1, wherein the suction apparatus is coupled
2 to a block, and further comprising a guide that is pivotally coupled to the frame, wherein the
3 guide includes a roller that moves behind the block when the suction apparatus is moved
4 downward to guide the suction apparatus in its downward path.

1 7. (Original) A system as in claim 2, further comprising a rod coupled to
2 each linkage arrangement, wherein the rod is movable up and down to simultaneously move each
3 linkage arrangement.

1 8. (Original) A system as in claim 1, further comprising an air jet associated
2 with each hopper, wherein the air jets are arranged to laterally supply air to the sheet-like
3 materials to facilitate separation of the sheet-like materials.

1 9. (Original) A system as in claim 1, further comprising a controller that is
2 configured to operate the moving system.

1 10. (Original) A system as in claim 1, further comprising at least one lower
2 belt that is configured to receive sheet-like materials from the upper belt.

1 11. (Original) A system as in claim 10, further comprising a set of transition
2 belts between the upper belt and the lower belt.

1 12. (Original) A system as in claim 1, further comprising a guide that is
2 configured to hold one of the sheet-like materials to the upper belt as the sheet-like material
3 moves toward the contact roller.

1 13. (Original) A system as in claim 10, further comprising a counter that is
2 configured to count the number of sheet-like materials passing along the lower belt.

1 14. (Original) A system as in claim 1, further comprising a vacuum
2 transducer that is adapted to sense the pressure within the suction apparatus to determine whether
3 one of the sheet-like materials is attached to the suction apparatus.

1 15. (Original) A system as in claim 10, further comprising a thickness tester
2 that is configured to determine the number of sheet-like materials stacked on the lower belt.

1 16. (Currently amended) A delivery system, comprising:
2 a frame;
3 a plurality of hoppers attachable to the frame in a vertically spaced apart
4 arrangement, wherein the hoppers are each configured to hold a plurality of sheet-like materials
5 in a generally vertical orientation;

6 at least one upper belt movably coupled to the frame, wherein the belt is
7 configured to move sheet-like materials downward from the hoppers;

8 at least one suction apparatus that is associated with each hopper, wherein the
9 suction apparatus is configured to grasp and remove the sheet-like materials from each hopper
10 and into contact with the upper belt, wherein the suction apparatus is configured to grasp and
11 remove the sheet-like material from the hopper while maintaining the sheet-like material
12 generally vertically oriented until the sheet-like material comes into contact with the upper belt.

1 17. (Original) A system as in claim 16, further comprising at least one contact
2 roller disposed below each hopper and a guide that is configured to hold one of the sheet-like
3 materials to the upper belt as the sheet-like material moves toward the contact roller.

18. (Canceled).

19. (Canceled).

20. (Canceled).

1 21. (Original) A method for moving sheet-like materials, the method
2 comprising:

3 coupling a plurality of hoppers to a frame in a vertically spaced apart
4 arrangement, wherein the hoppers each hold a plurality of sheet-like materials;

5 moving one of the sheet-like materials from one of the hoppers with a suction
6 apparatus;

7 moving the suction apparatus and the sheet-like material downward until the
8 sheet-like material is grabbed between at least one upper belt that is movably coupled to the
9 frame and at least one contact roller that is disposed below the hopper; and

10 moving the sheet-like material downward with the upper belt.

1 22. (Original) A method as in claim 21, further comprising simultaneously
2 moving individual sheet-like materials from at least two of the hoppers with separate suction
3 apparatus.

1 23. (Original) A method as in claim 22, further comprising simultaneously
2 moving the suction apparatus downward until each sheet-like material is grabbed between the
3 upper belt and a contact roller that is associated with each hopper.

1 24. (Original) A method as in claim 23, further comprising retracting the
2 suction apparatus behind the belt so that the sheet-like materials moving downward do not
3 contact the suction apparatus.

1 25. (Original) A method as in claim 21, further comprising holding the sheet-
2 like material to the upper belt with a guide as the sheet-like material moves toward the contact
3 roller.

1 26. (Original) A method as in claim 22, wherein each suction apparatus is
2 moved with a cylinder toward and away from the hopper, and wherein each suction apparatus is
3 moved up and down with a linkage arrangement that is pivotally coupled to the frame member.

1 27. (Original) A method as in claim 21, further comprising biasing the sheet-
2 like material against the contact roller with a biasing roller.

1 28. (Original) A method as in claim 21, wherein the suction apparatus
2 comprises a length of tubing and a suction cup coupled to the tubing.

1 29. (Original) A method as in claim 21, wherein the suction apparatus is
2 coupled to a block, and further comprising preventing backward movement of the suction
3 apparatus during downward movement with a roller that moves behind the block when the
4 suction apparatus is moved downward.

1 30. (Original) A method as in claim 26, wherein a rod is coupled to each
2 linkage arrangement, wherein the rod is moved up and down to simultaneously move each
3 linkage arrangement.

1 31. (Original) A method as in claim 21, further comprising supplying a gas
2 stream laterally into the sheet-like materials to facilitate separation of the sheet-like materials.

1 32. (Original) A method as in claim 21, further comprising a controller that is
2 configured to operate the moving system.

1 33. (Original) A method as in claim 21, further comprising providing at least
2 one lower belt that is configured to receive sheet-like materials from the upper belt and a set of
3 transition belts between the upper belt and the lower belt.

1 34. (Original) A method as in claim 33, further comprising counting the
2 number of sheet-like materials passing along the lower belt with a counter.

1 35. (Original) A method as in claim 21, further comprising sensing the
2 pressure within the suction apparatus to determine whether a sheet-like material is attached to the
3 suction apparatus.

1 36. (Original) A method as in claim 33, further comprising measuring the
2 thickness of each sheet-like material when on the lower belt to determine if one or more other
3 sheet like materials are attached to the sheet-like material.

37. (Canceled).

38. (Canceled).

39. (Canceled).

40. (Canceled).

1 41. (New) A delivery system, comprising:
2 a frame;
3 a plurality of hoppers attachable to the frame in a vertically spaced apart
4 arrangement, wherein the hoppers are each configured to hold a plurality of sheet-like materials;
5 at least one upper belt movably coupled to the frame, wherein the belt is
6 configured to move the sheet-like materials downward from the hoppers;
7 at least one suction apparatus that is associated with each hopper; and
8 a moving system that is configured to move the suction apparatus to grasp and
9 remove one of the sheet-like materials from the hopper and into contact with the upper belt; and

10 at least one contact roller disposed below each hopper and a biasing roller that is
11 spring biased against the contact roller.

1 42. (New) A delivery system, comprising:
2 a frame;
3 a plurality of hoppers attachable to the frame in a vertically spaced apart
4 arrangement, wherein the hoppers are each configured to hold a plurality of sheet-like materials;
5 at least one upper belt movably coupled to the frame, wherein the belt is
6 configured to move the sheet-like materials downward from the hoppers;
7 at least one suction apparatus that is associated with each hopper; and
8 a moving system that is configured to move the suction apparatus to grasp and
9 remove one of the sheet-like materials from the hopper and into contact with the upper belt; and
10 a controller that is configured to operate the moving system.

1 43. (New) A delivery system, comprising:
2 a frame;
3 a plurality of hoppers attachable to the frame in a vertically spaced apart
4 arrangement, wherein the hoppers are each configured to hold a plurality of sheet-like materials;
5 at least one upper belt movably coupled to the frame, wherein the belt is
6 configured to move sheet-like materials downward from the hoppers;
7 at least one suction apparatus that is associated with each hopper, wherein the
8 suction apparatus is configured to remove the sheet-like materials from each hopper and into
9 contact with the upper belt; and
10 at least one contact roller disposed below each hopper and a guide that is
11 configured to hold one of the sheet-like materials to the upper belt as the sheet-like material
12 moves toward the contact roller.